

Indoor Air Quality Protocols and Communication



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Regulatory



- ◆ ***Call comes in***
- ◆ ***“I have mold in my apartment, my landlord won’t do anything about it. What can you do for me?”***

Regulation



- ◆ ***Short answer***

- *Nothing, there is no mold standard*

- ◆ ***Long answer***

- *What other tools can we use?*

- ◆ ***Most important issue***


- *What is the root cause?*

Regulation



- ◆ ***Leaking Pipes***
 - ***RSA 48***
 - ***Local Housing Code***
- ◆ ***Lack of a bathroom vent***
 - ***Not required***
- ◆ ***Flooding***

RSA 48-A


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- ◆ **48-A:14 Minimum Standards Established.** – No landlord, as defined by RSA 540-A:1, I, renting or leasing a residential dwelling in a municipality which has not adopted ordinances, codes or bylaws pursuant to this chapter shall maintain those rented premises in a condition in which:
 - ◆ **II. There is defective internal plumbing or a back-up of sewage caused by a faulty septic or sewage system;**
 - ◆ **IV. The roof or walls leak consistently;**
 - ◆ **IX. There is an inadequate supply of water or whatever equipment that is available to heat water is not properly operating;**

Who Does the Work?



- ◆ ***American Indoor Air Quality Council***
 - ***CMI, CMC, CMR, CMRS***
- ◆ ***American Board of Industrial Hygiene***
 - ***CIH***

Purpose

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- ◆ ***Establish guidelines and uniformity for conducting indoor air quality and mold related investigations in Manchester schools.***

Investigations



5 Phases:



- ◆ ***1. Receipt of Complaint***
- ◆ ***2. Data Gathering***
- ◆ ***3. On Site Investigation***
- ◆ ***4. Report***
- ◆ ***5. Discuss Results***

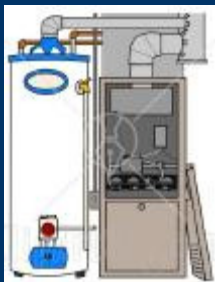
Phase 1: Receipt of Complaint

- ◆ ***Role of Principal***
- ◆ ***Open Dialogue with Those Concerned***



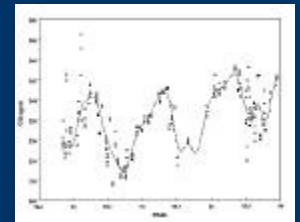
Phase 2: Data Gathering

- ◆ ***Interviews (Limited)***
- ◆ ***Diaries (Limited)***
- ◆ ***Questionnaire (Expanded)***
- ◆ ***School Nurse Data***
- ◆ ***Data Analysis***
- ◆ ***Building Design Review (Floor Plans, HVAC)***



Phase 3: On Site Investigation

- ◆ ***Walk-through of Building***



- ◆ ***Grab Sampling of Basic IAQ Parameters***

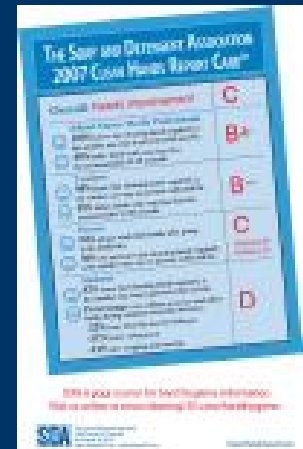


- ◆ ***Additional Sampling as Indicated***



Phase 4: Report

- ◆ ***Provide History & Background Information***
- ◆ ***Include Findings and Non-findings***
- ◆ ***Include Recommendations***



Phase 5: Discussions

◆ ***Principal***



◆ ***Staff***

◆ ***Parents***



◆ ***Building Maintenance***



Important Points

- ◆ ***Rarely is There a Single, Clear Cause IAQ Problems.***
- ◆ ***Other Issues Can Mask or Compound IAQ Problems.***
- ◆ ***No Magic Test to Find IAQ Problems***



Important Points



◆ ***Communicate***

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Proactive Communication

- ◆ **Identify an indoor air quality coordinator**
 - **“Tools for Schools” US EPA**
- ◆ **NH DOE Requirement!!! (see form)**
- ◆ **Staff can go to one person to seek information and/or share a concern**
- ◆ **Anticipate possible triggers**
- ◆ **Chain of Command**



WHO??



- ◆ ***School Principal***
- ◆ ***School Nurse***
- ◆ ***Chief of Facilities***
- ◆ ***Person with the least seniority***



Reactive Communication

- ◆ ***Share valid information as soon as you can***
- ◆ ***Take each concern seriously***
- ◆ ***Provide updates to complainants and other affected parties***
- ◆ ***Pre-identify media spokesperson***



Communication Best Practices



- ◆ ***Respect***
- ◆ ***Listen***
- ◆ ***Update***
- ◆ ***Rumor Control***
- ◆ ***Final Report***

Goal



- ◆ ***To work collaboratively to assure that a building's air quality is as good as possible.***

Case Study



IAQ Complaints in the School Setting



Chronic Issue

Details

- ◆ *Middle School*
- ◆ *Built into the **side** of a large **hill***
- ◆ *Subterranean “Bomb Shelter”*
 - *Dirt floor, unventilated space*



Data Collection



- ◆ ***Symptom questionnaires (journals)***
- ◆ ***IAQ parameters via data logger***
- ◆ ***School Nurse student asthma data***
- ◆ ***Face-to-face interviews with teachers***

Symptoms



- ◆ ***Stuffiness***
- ◆ ***Burning eyes***
- ◆ ***Respiratory***
- ◆ ***Rash***



What Did We Learn?

- ◆ ***Air exchange was not in balance***
 - ***Negative air in classroom space***
- ◆ ***Bomb shelter was being entered***
- ◆ ***Humidity levels were >50 %***
- ◆ ***Multiple complainants on the floor, all abutting the Bomb Shelter space***



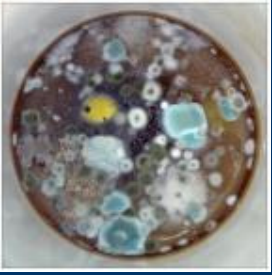


What Did We Do?



- ◆ ***Restricted access to bomb shelter, all staff***
- ◆ ***Installed a mechanical vent with alarm in the bomb shelter space (negative air)***
- ◆ ***Adjusted balance in rooms to be positive***



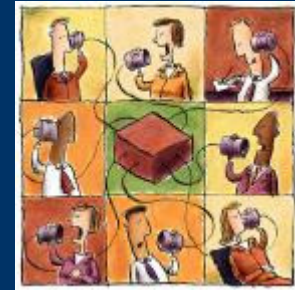


Added Wrinkle



- ◆ ***Specific*** mold related sensitivity complaint
- ◆ ***Indoor and Outdoor comparative sampling with **no** significant difference between the two***

Final Steps



- ◆ ***Communicate results***
- ◆ ***Establish a mechanism for any further complaints or issues***

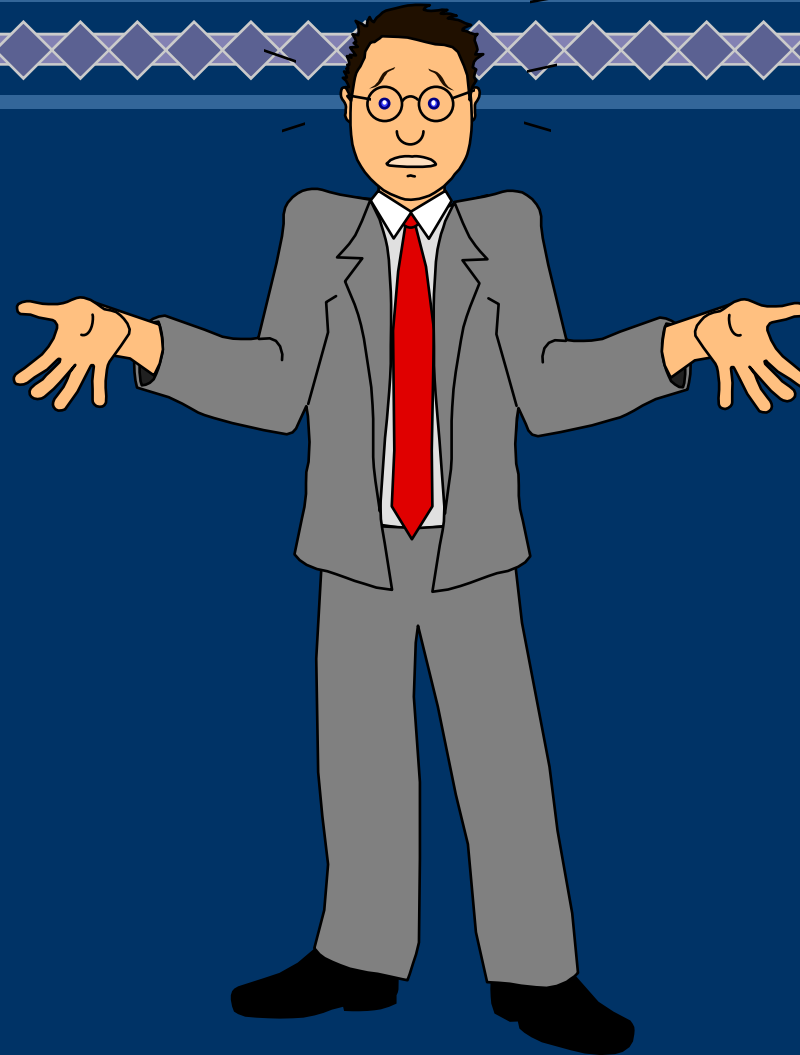
Special Thanks To:



◆ ***Jim Thomas, CIH, MPH***

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Questions & Answers



Resources

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- ◆ **http://www.education.nh.gov/program/school_approval/documents/A24IAQ.doc**
 - ◆ **<http://www.epa.gov/liaq/schools/>**
 - ◆ **http://www.ccohs.ca/oshanswers/physics_agents/thermal_comfort.html**
 - ◆ **<http://www.nyc.gov/html/doh/html/epi/molldrpt1.shtml>**

Contact Info



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